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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,930	11/06/2003	Liwen Xu	81044242(FGT1865)	2929

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EXAMINER

NGUYEN, TAN QUANG

ART UNIT	PAPER NUMBER
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3661

DATE MAILED: 06/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/605,930

**Applicant(s)**

XU ET AL.

**Examiner**

TAN Q. NGUYEN

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-160 is/are pending in the application.
- 4a) Of the above claim(s) 26-160 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## **DETAIL ACTION**

### ***Notice to Applicant(s)***

1. This office action is responsive to the response to the Restriction filed on June 03, 2005. As per request, Group I (claims 1-35) has been selected without traverse. Thus, claims 36-160 have been withdrawn as to non-elected claims.
2. Claims 6 and 9 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Specifically, claim 6 should depend on claim 5 rather than claim 1, and claim 9 should depend on claim 8 instead of claim 1.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-16 and 21-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lu et al. (6,799,092) in view of Larice et al. (2003/0021445).

6. With respect to claims 1 and 2, Lu et al. disclose a control system for an automotive vehicle which includes a rollover control system and a controller for generating a dynamic vehicle characteristic for use in controlling the rollover control system (see at least figure 3 and the related text).

7. Lu et al. do not disclose a camera-based vision system for generating image signal for the rollover control system. However, Larice et al. suggest a system and method for optically monitoring the environment of a moving vehicle to determine an inclination angle and use it for controlling one or more occupant protection devices such as airbags, belt tensioners, or a roll bar (see at least figures 2A, 4, 5, and paragraph 0043). It would have been obvious to an ordinary skill in the art to incorporate the teaching of the Larice et al. into the system of Lu et al. in order to provide the system with the enhanced capability of optically monitoring the environment of a moving vehicle and using it for controlling the rollover of vehicle.

8. With respect to claim 3, Lu et al. also disclose that the system includes a yaw control system (see at least figure 3, item 48).

9. With respect to claim 4, Lu et al. also disclose that the system includes a pitch angle signal (see figure 3, item 38).

10. With respect to claims 5 and 6, Lu et al. further disclose that the system includes a lateral accelerometer signal (or lateral velocity) for determining a loss of control and

use it for controlling the rollover for the vehicle (see figure 3, item 32 and the related text).

11. With respect to claim 7, Lu et al. also disclose a longitudinal acceleration signal (or longitudinal velocity) for use in controlling the rollover (see figure 3, item 36).

12. With respect to claims 8-10, Lu et al. do not disclose a road departure signal or an in-path object signal for use in controlling the rollover for the vehicle. However, Larice et al. do suggest a method for optically monitoring the environment of a moving vehicle which includes the road departure and in-path object parameter (see at least the abstract). It would have been obvious to an ordinary skill to incorporate such teaching of Larice et al. into the system of Lu et al. in order to take the information of the area surrounding the moving vehicle for improving the controlling the rollover for the vehicle.

13. With respect to claims 11-13, Lu et al. further disclose the use of vehicle lifted or body to road angle signals in the rollover control system (see at least figures 1 and 2).

14. With respect to claims 14-16, Lu et al. also suggest the use of wheel speed, wheel slip, rotational moment, and body side slip into account for controlling rollover condition (see at least the abstract, figures 1, 3, and column 4, line 37 to column 7, line 34).

15. Claims 21-35 are method claims corresponding to apparatus claims 1-16.

Therefore, claims 21-35 are rejected for the same rationales set forth for claims 1-16.

16. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lu et al. and Larice et al. as applied to the claims above, and further in view of Ishikawa et al. (6,292,111).

17. Lu et al. and Larice et al. disclose the claimed invention as discussed above except for the camera-based vision system comprises a stereo pair of cameras, and

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can be mounted in front or rear and on the side of the vehicle. However, such system using the stereo cameras is suggested in at least figures 1E, 2, and the related text of the Isikawa et al. It would have been obvious to one of an ordinary skill in the art to incorporate such teaching of Isikawa et al. into the combination system of Lu et al. and Larice et al. in order to monitor better the environment surrounding the moving vehicle by using two cameras, one for the front or rear, and one on the side, for further providing the more accurately the inclination angle.

18. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lu et al. and Larice et al. as applied to the claims above, and further in view of Nishikawa (5,913,375).

19. Lu et al. and Larice et al. disclose the claimed invention as discussed above except that the system includes a radar system for generating environment sensing signal. However, such method of using both camera system and radar system for detecting the environment of the moving vehicle and as shown in at least figure 3 of the Nishikawa reference. It would have been obvious to an ordinary skill in the art to incorporate the teaching of Nishikawa into the combination system of Lu et al. and Larice et al. in order to provide the more accurate the information of the environment of the moving vehicle, which in turn improving the rollover control system.

### ***Conclusion***

20. Claims 1-35 are rejected. Claims 36-160 have been withdrawn.

21. The following references are cited as being of general interest: Schubert (6,029,764), Guo et al. (6,128,066), Suzuki et al. (6,535,114), Chubb et al. (6,593,849),

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Woywod et al. (6,438,464), Prakah-Asante et al. (2003/0060980), Nakia et al. (2004/0096082).

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Tan Q. Nguyen, whose telephone number is (571) 272-6966. The examiner can normally be reached on Monday-Thursday from 5:30 AM-4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black, can be reached on (571) 272-6956.

Any response to this action should be mailed to:

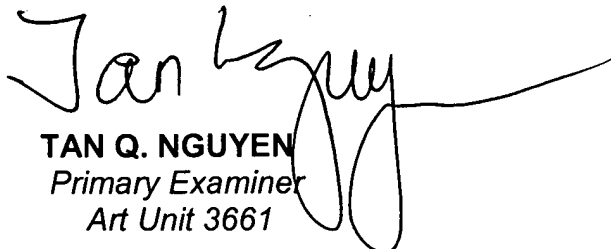
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or faxed to the Official Fax Center:

(703) 872-9306, (for informal or draft communications, please label "PROPOSED" or "DRAFT")

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/tqn  
June 20, 2005

  
**TAN Q. NGUYEN**  
Primary Examiner  
Art Unit 3661